

Kidney Disease Backgrounder

Fact Sheet

Kidney Disease in the United States

- Approximately 20 million Americans have kidney disease.¹
- Early kidney disease has no symptoms. If left undetected, it can progress to kidney failure, which requires dialysis or a transplant, with little or no warning.
- By the end of 2003, more than 128,000 people were living with a kidney transplant, and almost 325,000 were on dialysis — a number that has nearly tripled since 1988.²
- Public and private spending to treat patients with kidney failure in the United States in 2003 was \$27.3 billion,² up from around \$22 billion in 2001.
- By 2030, more than 2 million people will be receiving treatment for kidney failure.³

Risk Factors

The main risk factors for kidney disease are:

- Diabetes
- High blood pressure
- A family history of kidney failure
- Cardiovascular disease

The most common causes of kidney failure are diabetes and high blood pressure, together accounting for about 70 percent of new cases.²

Detection and Treatment

- Blood and urine tests are the only way to detect kidney disease.
- Kidney disease can be effectively treated if detected early. ACE (angiotensin-converting enzyme) inhibitors^{4,5,6,7} or ARBs^{8,9} (angiotensin receptor blockers) can prevent or slow progression of kidney disease to kidney failure.
- Intensive management of blood glucose is important for people with diabetes, especially if they have early stages of kidney disease.¹⁰

References

- 1 U.S. Renal Data System (2004). National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD.
- 2 U.S. Renal Data System (2005). National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD.
- 3 Gilbertson D, Solid C, Xue JL, Collins AJ. Projecting the U.S. ESRD population to 2030. Presented at 2003 ASN Annual Meeting. Available at: www.usrds.org/2003/pres/html/SU ASN_projections_files/frame.htm. Posted November 2003. Accessed April 3, 2006.
- 4 Giatras I, Lau J, Levey AS, Angiotensin-Converting-Enzyme Inhibition and Progressive Renal Disease Study Group. Effect of angiotensin-converting enzyme inhibitors on the progression of nondiabetic renal disease: a meta-analysis of randomized trials. *Annals of Internal Medicine*. 1997;127(5):337-345.
- 5 Jafar TH, Schmid CH, Landa M, Giatras I, Toto R, Remuzzi G, Maschio G, Brenner BM, Kamper A, Zucchelli P, Becker G, Himmelman A, Bannister K, Landais P, Shahinfar S, de Jong PE, de Zeeuw D, Lau J, Levey AS. Angiotensin-converting enzyme inhibitors and progression of nondiabetic renal disease: a meta-analysis of patient-level data. *Annals of Internal Medicine*. 2001;135(2):73-87.
- 6 Kshirsagar AV, Joy MS, Hogan SL, Falk RJ, Colindres RE. Effect of ACE inhibitors in diabetic and nondiabetic chronic renal disease: a systematic overview of randomized placebo-controlled trials. *American Journal of Kidney Diseases*. 2000;35(4):695-707.
- 7 Wright JT Jr, Bakris G, Greene T, Agodoa LY, Appel LJ, Charleston J, Cheek D, Douglas-Baltimore JG, Gassman J, Glasscock R, Hebert L, Jamerson K, Lewis J, Phillips RA, Toto RD, Middleton JP, Rostand SG, African American Study of Kidney Disease and Hypertension Study Group. Effect of blood pressure lowering and antihypertensive drug class on progression of hypertensive kidney disease: results from the AASK trial. *JAMA*. 2002;288(19):2421-2431.
- 8 Lewis EJ, Hunsicker LG, Clarke WR, Berl T, Pohl MA, Lewis JB, Ritz E, Atkins RC, Rohde R, Razl I. Renoprotective effect of the angiotensin-receptor antagonist irbesartan in patients with nephropathy due to type 2 diabetes. *New England Journal of Medicine*. 2001;345(12):851-860.
- 9 Brenner BM, Cooper ME, de Zeeuw D, Keane WF, Mitch WE, Parving HH, Remuzzi G, Snapinn SM, Zhang Z, Shahinfar S, RENAAL Study Investigators. Effects of losartan on renal and cardiovascular outcomes in patients with type 2 diabetes and nephropathy. *New England Journal of Medicine*. 2001;345(12):861-869.
- 10 National Kidney and Urologic Diseases Information Clearinghouse. *Kidney Disease of Diabetes*. Washington, DC: US Government Printing Office; 2006. NIH Publication 06-3925. Fact sheet.